

BEST AVAILABLE COPY

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 May 2003 (22.05.2003)

PCT

(10) International Publication Number
WO 03/041684 A3

(51) International Patent Classification⁷:

A61K 9/00

(74) Agents: DATE, Vandana et al.; ALZA CORPORATION, 1900 Charleston Road, P.O. Box 7210, Mountain View, CA 94039-7210 (US).

(21) International Application Number: PCT/US02/36715

(22) International Filing Date:

14 November 2002 (14.11.2002)

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(71) Applicant: ALZA CORPORATION [US/US]; 1900 Charleston Road, P.O. Box 7210, Mountain View, CA 94039-7210 (US).

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

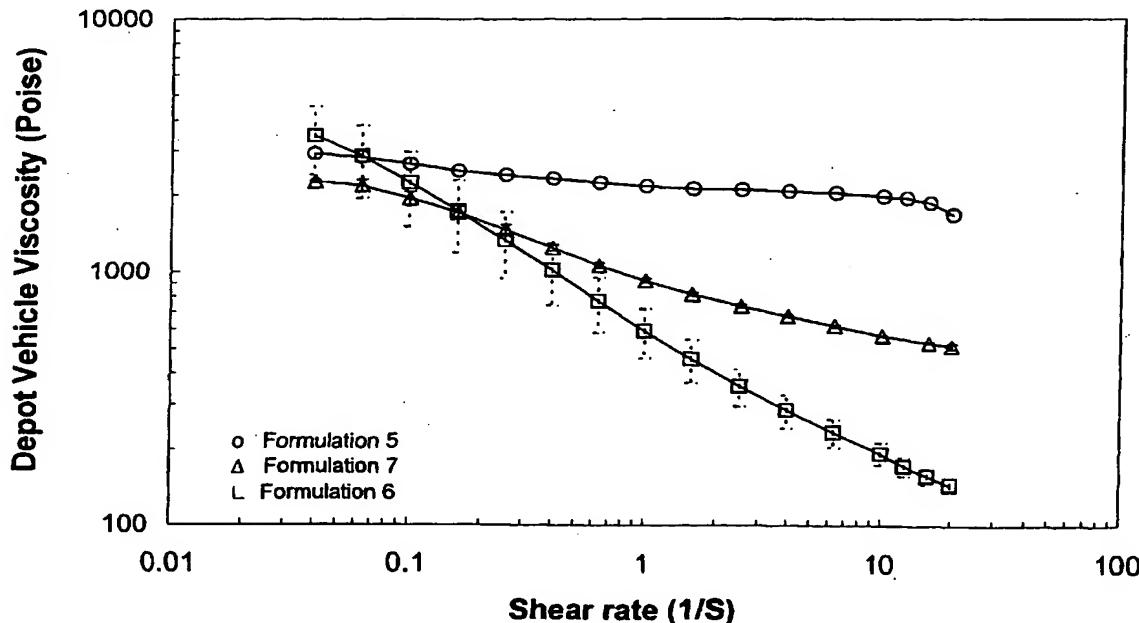
(72) Inventors: CHEN, Guohua; 399 Sunset Avenue, Sunnyvale, CA 94086 (US). HOUSTON, Paul, Ricky; 3889 Blackstone Court, Hayward, CA 94542 (US). KLEINER, Lothar, Walther; 295 Los Altos Court, Los Altos, CA 94022 (US). WRIGHT, Jeremy, Corwin; 631 Cuesta Drive, Los Altos, CA 94024-4135 (US).

Published:

— with international search report

[Continued on next page]

(54) Title: INJECTABLE DEPOT COMPOSITIONS AND USES THEREOF



WO 03/041684 A3

(57) Abstract: Injectable depot compositions are provided that include a bioerodible, biocompatible polymer, an aromatic alcohol having miscibility in water of less than or equal to 7 wt.% at 25°C, in an amount effective to plasticize the polymer and form a gel therewith, and a beneficial agent. The composition may additionally contain an ester of an aromatic acid, or an aromatic ketone. The compositions are readily implanted beneath a patient's body surface by injection, as the aromatic alcohol not only facilitates solubilization of the polymer, but also acts as a thixotropic agent, substantially increasing the shear thinning behavior of the composition.



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

12 September 2003

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/36715

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

-Minimum documentation searched-(classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 93 24150 A (ZENECA LTD) 9 December 1993 (1993-12-09) page 26, paragraph 2 -page 29, paragraph 1 examples 16-20 claims ---	1-87
X	WO 95 13799 A (MEDISORB TECHNOLOGIES INTERNAT) 26 May 1995 (1995-05-26) example 1 ---	1-8
X	WO 98 27963 A (ALZA CORP) 2 July 1998 (1998-07-02) example 2 & US 613 200 A cited in the application ---	1-87

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

23 June 2003

03/07/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Epskamp, S

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/36715

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00 74650 A (ALZA CORP) 14 December 2000 (2000-12-14) example 1 ----	1-87
P, X	WO 02 067991 A (GENENTECH INC) 6 September 2002 (2002-09-06) examples claims ----	1-87

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/36715

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 45-87 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/36715

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9324150	A 09-12-1993	AT 407702 B AT 901993 A AU 682310 B2 AU 4084793 A BE 1006143 A3 CA 2136751 A1 CH 688911 A5 CH 690491 A5 CZ 9402937 A3 DE 4392401 T0 DK 135394 A ES 2107357 A1 FI 945553 A FR 2691631 A1 WO 9324150 A1 GB 2282066 A ,B GR 1001550 B HK 133097 A HU 70177 A2 IE 930358 A1 IL 105710 A IT MI931099 A1 JP 8501064 T LU 88559 A1 MC 2330 A NL 9320034 T NO 944535 A NZ 252268 A RU 2152225 C1 SE 501970 C2 SE 9404115 A SG 44645 A1 SK 143494 A3 US 6034175 A US 5889110 A US 2002198315 A1 ZA 9303358 A	25-05-2001 15-10-2000 02-10-1997 30-12-1993 24-05-1994 09-12-1993 29-05-1998 29-09-2000 15-03-1995 24-07-1997 28-11-1994 16-11-1997 25-01-1995 03-12-1993 09-12-1993 29-03-1995 29-04-1994 24-10-1997 28-09-1995 01-12-1993 19-03-2001 28-12-1993 06-02-1996 05-04-1995 31-05-1994 03-04-1995 25-01-1995 20-12-1996 10-07-2000 03-07-1995 28-11-1994 19-12-1997 11-07-1995 07-03-2000 30-03-1999 26-12-2002 15-09-1994
WO 9513799	A 26-05-1995	AT 212830 T AU 684324 B2 AU 1101095 A AU 697887 B2 AU 3683197 A CA 2176716 A1 DE 69429820 D1 DE 69429820 T2 DK 729353 T3 EP 0729353 A1 EP 0998917 A1 ES 2172574 T3 JP 9505308 T PT 729353 T WO 9513799 A1 US 5654008 A US 5650173 A	15-02-2002 11-12-1997 06-06-1995 22-10-1998 20-11-1997 26-05-1995 21-03-2002 14-11-2002 27-05-2002 04-09-1996 10-05-2000 01-10-2002 27-05-1997 31-07-2002 26-05-1995 05-08-1997 22-07-1997
WO 9827963	A 02-07-1998	AT 203157 T AU 5609798 A	15-08-2001 17-07-1998

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/36715

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9827963	A	AU 739469 B2 AU 5615498 A DE 69705746 D1 DE 69705746 T2 DK 949905 T3 EP 0949905 A2 EP 0959873 A2 ES 2158611 T3 GR 3036599 T3 HK 1020009 A1 JP 2002512597 T JP 2001509146 T NZ 335851 A PT 949905 T WO 9827962 A2 WO 9827963 A2 US 2003044467 A1 US 6468961 B1 US 2002034532 A1 US 6331311 B1 US 6130200 A	11-10-2001 17-07-1998 23-08-2001 31-10-2001 22-10-2001 20-10-1999 01-12-1999 01-09-2001 31-12-2001 02-11-2001 23-04-2002 10-07-2001 23-02-2001 28-12-2001 02-07-1998 02-07-1998 06-03-2003 22-10-2002 21-03-2002 18-12-2001 10-10-2000
WO 0074650	A 14-12-2000	AU 5462900 A CA 2372994 A1 CZ 20014338 A3 EP 1183010 A2 HU 0201626 A2 JP 2003501375 T NO 20015888 A WO 0074650 A2	28-12-2000 14-12-2000 13-03-2002 06-03-2002 28-12-2002 14-01-2003 31-01-2002 14-12-2000
WO 02067991	A 06-09-2002	US 2002173552 A1 WO 02067991 A1	21-11-2002 06-09-2002

This Page Blank (uspto)

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

This Page Blank (uspto)